SEPTEMBER 27, 1880.

A New Locality for Sphene.—Dr. A. E. FOOTE described the new locality for sphene and associated minerals at Eganville, Renfrew Co., Canada. The sphene occurs in immense crystals, weighing from 20 to 80 lbs., in a vein of apatite 20 feet wide. Many other veins of smaller size occur in the same county.

The rock is principally Laurentian gneiss and granite. A solid mass of sphene, very highly cleavable ($5 \times 2 \times 2$ feet), was observed in the side of the vein. It yielded several hundred pounds of sphene. Close by it doubly-terminated crystals of scapolite, weighing over 50 lbs., and crystals of pyroxene, weighing from 12 to 30 lbs., were found. Phlogopite and zircons, some of them twinned, occur at the same locality. From the enormous size of all the crystals found in this county, it must rank as one of the most remarkable mineral localities known. When the vein, 20 feet wide, spoken of above, was discovered, a doubly-terminated crystal of apatite, weighing 500 lbs., and bright upon the surface and ends, was said to have been found.

OCTOBER 25, 1880.

A New Locality for Hyalite.—Mr. H. C. LEWIS reported that he had found hyalite forming green, glassy coatings on hornblendic gneiss at a quarry on Mill Street, Germantown. The mineral has the usual mammillary or botryoidal surface, is perfectly transparent, and has a beautiful light green color. The color is due to the presence of copper, as shown by blowpipe tests.

Note on Autunite.—Mr. H. C. LEWIS remarked that he had recently investigated the optical character of the Fairmount autunite. His examination confirmed the orthorhombic character of autunite. The bissectrix is normal to the main cleavage-plane, and parallel to the secondary diagonal planes. The optic axial divergence is 24°. The autunite from Limoges, France, has an optic axial divergence of about 38°.

DECEMBER 27, 1880.

Crystalline Cavities in Agate.—Mr. THEO. D. RAND exhibited three specimens of agate, locality unknown, in the centre of each of which was a cavity with plane sides, and casts of these cavities showing them to have been calcite crystals. The method of taking these casts, the sides of the cavities being rough with re-entering angles, was explained. A solution of glue, with about one-fifth of glycerine, of such consistence as to form a thick, firm jelly when cold, but to be perfectly fluid when hot, was prepared and heated. The specimen was then cooled to about 32°; a rough splinter of wood was inserted in the cavity which was previously moistened with cold water. A drop or two of the glue solution

—hot—was poured in and allowed to become firm. The wood was then carefully moved until the glue was detached from the stone, but not removed, or if removed the splinter marked so as to be returned to the same position. More glue was then poured in and the operation repeated. A mould was then made of the glue in plaster, and from this type-metal casts obtained.

JANUARY 24, 1881.

Note on Halotrichite.—Mr. LEWIS described two localities of halotrichite in the neighborhood of Philadelphia, and exhibited specimens. It occurs in fine incrustations on hornblendic gneiss on the river drive below Strawberry Mansion, Fairmount Park, and it occurs as an impure efflorescence at the West Jersey marl-pits, where it is mixed with sulphatite and melanterite.

On Twin Crystals of Zircon.—Dr. A. E. FOOTE recorded the discovery of perfect twin crystals of zircon, near Eganville, Renfrew Co., Canada. He had obtained small but imperfect twin crystals over four months before, but sufficiently distinct to establish the character of the twinning at that time. As in cassiterite and rutile, the twinning plane is 1 — i. It is doubtful if twins of zircon have ever been seen before.

APRIL 25, 1881.

Note on the Drift of Lycoming County, Pa.—Mr. ABRAHAM MEYER contributed some observations on the rocks and drift of Lycoming County, and especially of that portion in the vicinity of Lycoming Creek. He described the exposures on Lycoming Creek and commented on the various theories proposed to explain the geology of the county. He drew attention to the ridges of drift ("stony batter") on Lycoming Creek and on Hogelan's Run, which he supposed were formed by glacial action. He had found pebbles of granite and of hornblendic gneiss with magnetite in several places in Lycoming and Tioga Counties, and hoped that a careful study would be made of that region.

Discs of Quartz between Laminæ of Mica.—Mr. THEO. D. RAND exhibited a curious form of quartz occurring between the laminæ of muscovite, from Amelia Co., Va. Part of it was crystallized in the common form, but part was in discs, one-tenth of an inch in diameter and less, which, with polarized light under the microscope, showed a black cross which rotated as the analyzer was rotated. He stated that these disks were much like those from Swaim's quarry, Chester Co., Pa., hitherto undetermined, but much larger than the latter, and that it was probable those from Swaim's were also quartz.